

Informational Points Regarding MRGDC Regional Trunked Radio System (RTRS)

July 20, 2015

The Regional Trunked Radio System (RTRS) was built out over the past ten years. Planning, informational surveys, jurisdictional memorandums of understanding (MOU)s (with 100% participation), and engineering, began in 2003/2004; the actual construction began in 2005. The RTRS is a public safety 2-way radio communications system serving the first responders of the Middle Rio Grande Development Council (MRGDC) region, as well as state, federal, and tribal public safety agencies. The RTRS was the first of its type and size VHF trunked radio system to be deployed in the lower 48 states and has been considered the “flagship” system in Texas.

The RTRS provides 2-way radio roaming coverage to over 27,000 square miles along and away from the Texas-Mexico border through major highway corridors that cross the MRGDC nine county region and beyond. With TXDot partnership, the seamless radio coverage beyond the region is extended beyond 32,000 square miles. Operating within the Texas “system-of-systems” radio coverage can be extended across the state of Texas and beyond.

The RTRS is utilized by not only local responders and law enforcement, but also supports state and federal partners for day to day joint operations along the Texas-Mexico border as well as emergency operations.

Due to declining funds, the RTRS can no longer be sustained without additional support. A system of this type cannot effectively partially function. All of the RTRS towers are linked together through a common Master Switch in Austin, Texas, which allows all of the IR (Intelligent Repeater) towers to operate as one radio system. Connectivity must be maintained with the Master Switch and all automated features must be maintained to perform the powerful features and capabilities of the system.

If the RTRS is allowed to be decommissioned, the first responders of the MRGDC, state, federal, and tribal agencies will have lost a powerful and expensive (\$7.5 million in infrastructure alone) state of the art communications system that will

more than likely never be resurrected. The RTRS is a powerful asset to the local first responders, to Texas public safety agencies, to local/state emergency operations, and to the Border Security of the Texas-Mexico border. The loss of the RTRS will negatively impact the “system-of-systems” adopted by the state of Texas and defined by the Homeland Security SAFECOM program.

To fund the basic maintenance of the RTRS, approximate funds needed are \$250,000 per year and does not include administrative cost or future equipment upgrades. However, also keep in mind that to decommission the RTRS will also require significant funds. The RTRS can’t just be turned off. The RTRS will require a phased decommissioning process, along with extensive reprogramming of all user radios.

The following are decommissioning impact points to consider:

- Maintenance contracts for infrastructure support and software upgrades will be terminated. These basic costs annually average \$ 148,000 per year for all 16 IR tower sites. Breakdowns will not be repaired, causing significant operational issues for radio users.
- T1 line connectivity between the MRGDC three host sites to the Austin Master Switch through DIR costs an average of \$ 26,000 per year. If not funded, this connectivity will be terminated and force IR sites into “site trunking only”, which will cause substantial issues for operations.
- Microwave maintenance will cease, which provides interregional connectivity between tower sites. These costs average, along with heavy duty UPSs, surge protectors, antennas, coax, combiners and receiver couplers maintenance at about \$50,000 per year. Connectivity between tower sites, if system is damaged or fails, will be eliminated. Loss of microwave links will cause substantial operational issues for radio users.
- Staff that maintains the infrastructure and provides radio programming for almost 3,000 radios and provides training and system support for the entire region would also be impacted and could be reduced or eliminated. This is 2-1/2 FTE’s (part time- half -FTE).
- Wide-area system roaming, which allows for radio users to communicate over large geographic areas beyond, would be terminated.

- County tower sites would become site specific and only be able to transmit and receive communications from those units that would be within the tower site's respective zone of coverage.
- Trunking features, software upgrade features, and enhanced radio capabilities would be diminished and or eliminated across the entire radio fleet.
- IR tower sites would have to be de-automated and system technology and capabilities would have to revert back to site specific repeaters only and all radios within the region would have to be re-programmed and radio users' coverage would only be functional in technology similar to 1970's capabilities.
- To de-automate the IR tower sites will require funds, time, and careful coordination through a planned phased approach.
- To reprogram all user radios within the RTRS will require funds, time, and careful coordination through a planned phased approach.
- MRGDC staff will require some expensive technical assistance. The decommissioning project will be too extensive for MRGDC staff to accomplish within a reasonable time frame.
- With the RTRS infrastructure gone, the dispatch centers within the MRGDC will lack the ability to dispatch or communicate by radio to other distant dispatch centers without the build out of another infrastructure network or in some cases by reorganizing multiple antenna configurations dispatch centers could achieve the same thing, but on a very limited basis.
- Rural counties and cities do not have the operational funds to maintain regional systems. While they can minimally support their radio subscriber fleets, infrastructure funding is typically not available locally.
- Interoperable communications across the border regions is critical, the short term and long term elimination of funding for these systems will have huge impacts on day to day communications between all responders. Thus, impacting Texas-Mexico border security.
- The MRGDC first responders will no longer have a very simple direct access to the State Operations Center (SOC) in Austin. Direct access will have to be by other means, such as HF radio, internet, satellite, etc.

- The Customs Border Protection (CBP)/MRGDC Interoperable Interface System will no longer function on a automated regional coverage basis; it will be site specific on county or city conventional channels only.
- Texas will lose significant momentum as a leader in public safety communications across the nation and will fall behind in the development and build out of the statewide “system-of-systems” network which provides for local and regional responders to be able to talk state wide as needed during times of disaster. There again, any interface into the “system-of-systems” will be site specific only, not regional over a vast geographic area.

MRGDC and their elected officials have reached out to both state and federal elected officials. More help is needed from the first responder community. Please utilize the previous information regarding the RTRS funding issue and use it appropriately in discussions to procure immediate emergency funding to continue the RTRS operations. The RTRS could be considered critical infrastructure and every effort should be made to save the communications system.